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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,420	10/17/2000	Kazuo Ishikawa	5000-4810	3352

7590 05/16/2003

Steven F Meyer
Morgan & Finnegan LLP
345 Park Avenue
New York, NY 10154

EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/690,420	Ishikawa et al.
Examiner	**Art Unit**
Vanaman	3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Apr 21, 2003*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-44, 47, 48, and 50* is/are pending in the application.

4a) Of the above, claim(s) *30-33, 35-37, 39, 41-44, 47, and 50* is/are withdrawn from consideration.

5) ☒ Claim(s) *1-29* is/are allowed.

6) ☒ Claim(s) *34, 38, 40, and 48* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 13
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Feb. 25, 2003 has been entered.

Status of Application

2. Claims 1-44, 47, 48 and 50 are pending, claims 45, 46 and 49 having been canceled by the most recent amendment. Claims 30-33, 35-37, 39, 41-44, 47 and 50 remain pending, but are withdrawn from consideration as being directed to a non-elected species, there being no identified generic claim. An office action on claims 1-29, 34, 38, 40 and 48 follows.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 34, 38, 40 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimanaka et al. (US 5,150,761) in view of Tsuno (US 5,719,565, filed 7/1996). Shimanaka et al. teach a vehicle having an engine (210) and a transmission (211) including a forward clutch (F/C) operated with a forward clutch valve (46), a reverse clutch (R/C) operated with a reverse clutch valve (68), a plurality of driving speed sensors (212, 212a) associated with a front and rear pair of wheels, one pair of which is driven by the transmission, a skid detector (219), wherein a transmission line pressure is decreased if the traction control determines that skidding occurs and controls an engine output power by decreasing a throttle valve opening (note col. 6, line 58 through col. 7, line 23). The reference of Shimanaka et al. fails to teach the provision of a torque converter connecting the engine and transmission and driving wheel differential, however it is very old and well known to provide a torque converter to allow the engine to drive the transmission, and it would have been obvious to one of ordinary skill in the art at the time of the invention to

provide a torque converter between the engine output and the transmission input in order to allow the engine to drive the wheels, similarly the use of a differential with the driving wheels of a vehicle, allowing different wheel speeds in cornering for example, is very old and well known, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a differential to the driving wheels in order to allow the wheels to run at different speed when cornering, for example. The reference of Shimanaka et al. fails to teach the use of a rate of change of wheel velocity in the determination of skidding occurrences, wherein each wheel speed is measured. Tsuno teaches a controller for anti-lock and slip control, wherein wheel speeds for all vehicle wheels are determined (sensors 5-8) and before processing, wheel speed rate of change (i.e., acceleration and deceleration- A3, A5) is additionally determined (step 130) the acceleration being predetermined (i.e., values DVW, DVWB) before control (i.e. steps 1130, 1140, 1150 occur before 1170 and 1180). It would have been obvious to one of ordinary skill in the art at the time of the invention to include an acceleration determination as taught by Tsuno in the controller of Shimanaka et al. for the purpose of controlling the magnitude of slip-control or anti-lock control based on the acceleration values, facilitating a faster reacquisition of traction for the vehicle.

Allowable Subject Matter

5. Claims 1-29 are allowed.

Response to Arguments

6. Applicant's arguments, filed with the amendment, have been carefully considered. As regards claim 4, the examiner agrees that the references to Iwata and Matsuda fail to teach the additional structure added to the claim recitation. As regards the references to Shimanaka et al. and Tsuno, applicant has suggested that there are differences in the reference to Tsuno which do not meet the claimed limitations. The examiner has not suggested that the use of a filtered acceleration variance be utilized with the system taught by Shimanaka et al., instead, it is only Tsuno's determination of acceleration from a change in wheel speed before further processing

which has been relied upon, as Shimanaka et al. fail to specifically teach the use of acceleration values in determination and control of wheel slip, the use of acceleration values being deemed advantageous in facilitating a faster reacquisition of traction for the vehicle than speed values alone.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is (703) 308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop ____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to :

(703) 305-3597 or 305-7687 (for formal communications intended for entry; informal or draft communications may be faxed to the same number but should be clearly labeled "UNOFFICIAL" or "DRAFT")

The Office has also established electronic fax servers for Technology Center 3600 as follows:

703-872-9326 (Official communications)
703-872-9327 (Official After Final communications)
703-872-9325 (Customer Service)

F. VANAMAN
Primary Examiner
Art Unit 3618

F. Vanaman
May 14, 2003

5/14/03